CLAIMS

What is claimed is:

1. A storage system with multiple disk drives comprising:

a rectangular prismatic enclosure with six substantially planar sides having at least two largest sides and a primary access side and an input/output side, said primary access side not being one of said at least two largest sides and said input/output side being opposite of and substantially parallel to said primary access side;

a back plane oriented substantially parallel to said at least one of said two largest sides, said back plane having a plurality of disk drive interface connectors and at least one interface connector;

a plurality of disk drives having an elongated rectangular prismatic shape comprising two large faces and two small faces, one of said two large faces oriented perpendicularly to said backplane, each of said plurality of disk drives electrically connected to said disk drive interface connectors of said backplane; and

said back plane with said plurality of disk drives slidingly engaged into said interface and adapted to be removed from said enclosure through said access side as a single unit.

2. The storage system of claim 1 further comprising:

an interface mechanism engaged to said interface connector and capable of transferring signals from said interface connector to at least one input/output connector accessible from said input/output side.

3. The storage system of claim 1 further comprising:

at least one fan capable of causing air to flow substantially from said primary access side to said input/output side.

4. The storage system of claim 1 further comprising:

at least one fan capable of causing air to flow substantially from said input/output side to primary access side.

5. The storage system of claim 1 further comprising:

at least one fan capable of causing air to flow substantially from the first side perpendicular to said primary access side and one of said largest faces to the side opposite said first side.

6. The storage system of claim 1 wherein said disk drive further comprises a connector on said one of said two small faces, said connector being engaged into one of said disk drive interface connectors of said backplane.

7. The storage system of claim 1 wherein said disk drive further comprises a mounting frame.

8. The storage system of claim 1 wherein said disk drives are 2.5 inch form factor disk drives.

9. The storage system of claim 1 wherein said disk drives are 3.5 inch form factor disk drives.

10. The storage system of claim 1 further comprising:

a frame onto which are mounted said backplane and said plurality of drives, said frame adapted to slidingly insert into said enclosure from said access side; and

wherein said single unit comprises said backplane, said plurality of disk drives, and said frame.

11. The storage system of claim 1 wherein said enclosure is a rack mountable enclosure.

12. The storage system of claim 1 wherein said enclosure is a free standing enclosure.

13. The storage system of claim 1 wherein said plurality of disk drives are oriented such that one of said small faces is substantially parallel to said backplane.

14. The storage system of claim 1 wherein said plurality of disk drives are oriented such that one of said small faces is substantially perpendicular to said backplane.

15. A method for constructing a storage system with multiple disk drives comprising:

providing a rectangular prismatic enclosure with six substantially planar sides having at least two largest sides, a primary access side, and an input/output side, said primary access side not being one of said at least two largest sides and said input/output side being opposite of and substantially parallel to said primary access side;

providing a plurality of disk drives having an elongated rectangular prismatic shape comprising two large faces and two small faces, one of said two small faces oriented parallel to said backplane;

providing a back plane oriented substantially parallel to one of the at least two largest sides, said back plane having a plurality of disk drive interface connectors and at least one interface connector; said back plane with said plurality of disk drives adapted to be slidingly engaged into said interface and adapted to be removed from said enclosure through said access side as a single unit;

electrically connecting said plurality of disk drives to said disk drive interface connectors of said backplane; and

sliding said backplane and said plurality of disk drives into said enclosure through said access side.

16. The method of claim 15 further comprising:

providing an interface mechanism engagable to said interface connector and capable of transferring signals from said interface connector to at least one input/output connector accessible from said input/output side; and

installing said interface mechanism into said enclosure such that said at least one input/output connector is accessible from said input/output side.

17. The method of claim 15 further comprising:

providing at least one fan; and

installing said at least one fan such that air is caused to flow substantially from said primary access side to said input/output side when said fan is operable.

18. The method of claim 15 further comprising:

providing at least one fan; and

installing said at least one fan such that air is caused to flow substantially from said input/output side to primary access side when said fan is operable.

19. The method of claim 15 further comprising:

providing at least one fan; and

installing said at least one fan such that air is caused to flow substantially from the first side perpendicular to said primary access side and one of said largest faces to the side opposite said first side when said fan is operable.

20. The method of claim 15 wherein said disk drive further comprises a connector on said one of said two small faces, said connector being engagable into one of said disk drive interface connectors of said backplane.

21. The method of claim 15 wherein said disk drive further comprises a mounting frame.

22. The method of claim 15 wherein said disk drives are 2.5 inch form factor disk drives.

23. The method of claim 15 wherein said disk drives are 1 inch form factor disk drives.

24. The method of claim 15 further comprising:

providing a frame adapted to mount said backplane and said plurality of drives, said frame adapted to slidingly insert into said enclosure from said access side; and

installing said backplane to said frame.

25. The method of claim 15 wherein said enclosure is a rack mountable enclosure.

26. The method of claim 15 wherein said enclosure is a free standing enclosure.

27. The method of claim 15 wherein said plurality of disk drives are oriented such that one of said small faces is substantially parallel to said backplane.

28. The method of claim 15 wherein said plurality of disk drives are oriented such that one of said small faces is substantially perpendicular to said backplane.